

WHAT IS CLAIMED IS:

1. A mounting apparatus for rotatably securing a coated abrasive finishing article (10) having a first surface (12) coated with abrasive material and a second uncoated surface (14) and defining a centrally located first aperture (16), having an edge (24) therethrough, to a power tool drive member (30) which includes a support member having a support pad (32) for engaging said second surface, a nut (18) having a body extending through said aperture for threadably engaging said power tool and said body having an outwardly extending first flange (20) at one end engaging said first surface characterized by:

the body of said nut having (a) an outer surface (22) adapted to engage said edge (24) of said aperture (16) in a substantially interference fit, and (b) an externally threaded shank (26) for engagement with said power tool drive member (30);

the support pad defining a centrally located second aperture (35) therethrough and having a face (34) for engaging said second surface, said pad having a reduced thickness region adjacent and surrounding said second aperture; and

said support member further including a hollow externally threaded cylinder (42) having a second outwardly extending flange (36) at one end thereof and a compression ring (46) defining internal threads, said second flange being received within said reduced thickness region and said compression ring being threadably received on said external threaded cylinder to secure said support pad upon said cylinder, said one end of said cylinder defining a recess (64) for receiving said first flange so that when assembled in operational configuration on said power tool, said flange is below said first surface so as not to engage a work piece.

2. A mounting apparatus as defined in claim 1 wherein said nut is formed of a metal material and is adapted to be reused after the coated abrasive finishing article is spent.

3. A mounting apparatus as defined in claim 2 wherein said outer surface is irregular and is formed by a plurality of alternating ridges and grooves.

4. A mounting apparatus as defined in claim 3 wherein said ridges are substantially parallel to the axis of said body and when said nut is inserted through said first

aperture said ridges cut into said edge of said first aperture to form said substantially interference fit.

5. A mounting apparatus as defined in claim 4 wherein said nut may be popped out of said first aperture after said coated abrasive article is spent and may be inserted into a subsequent coated abrasive article for use.

6. A mounting apparatus as defined in claim 1 wherein said hollow cylinder includes a through bore defining a recess adjacent the other end thereof, and an "O" ring seated within said recess for engaging the drive member to assist in retaining said support member on said drive member when coated abrasive finishing articles are changed.

7. A disposable coated abrasive finishing article (10) including a disposable mounting apparatus for rotatably securing the same to a power tool drive member (30) and having a first surface (12) coated with abrasive material and a second uncoated surface (14) and defining a centrally located first aperture (16), having an edge (24) therethrough, said power tool drive member (30) including a support member having a support pad (32) for engaging said second surface, a nut (18) having a body extending through said aperture for threadably engaging said power tool and said body having an outwardly extending first flange (20) at one end engaging said first surface characterized by:

the body of said nut having (a) an outer surface (22) having a first diameter (d1) and adapted to engage said edge (24) of said aperture (16) in a substantially interference fit, and (b) an externally threaded shank (26) for engagement with said power tool drive member (30);

a retention member (78) defining a second aperture therethrough having a second diameter (d2), said second diameter being no larger than said first diameter; and

said retention member (78) surrounding said outer surface of said body and engaging said second uncoated surface of said abrasive article, said retention member at said second aperture engaging said outer surface (22) in an interference fit.

8. A disposable abrasive finishing article as defined in claim 7 wherein said nut is formed of a plastic material.

9. A disposable abrasive finishing article as defined in claim 8 wherein said plastic material is extruded polyvinylchloride and said threaded shank includes rolled threads.

10. A disposable abrasive finishing article as defined in claim 8 wherein said second diameter is smaller than said first diameter.

11. A disposable abrasive finishing article as defined in claim 7 wherein said abrasive finishing article surrounding said first aperture is symmetrically formed in a direction toward said second surface.

12. A disposable abrasive finishing article as defined in claim 11 wherein said support member defines a recess therein and said symmetrically formed portion of said finishing article is adapted to seat within said recess.

13. A disposable abrasive finishing article as defined in claim 7 wherein said retention member is a flat washer.

14. A disposable abrasive finishing article as defined in claim 13 wherein said second diameter is smaller than said first diameter.

15. A disposable abrasive finishing article as defined in claim 14 wherein said finishing article surrounding said first aperture is symmetrically formed in a direction toward said second surface and said flat washer is canted to follow said second surface.